

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Previously Presented): A Nd-Fe-B type rare earth magnet alloy for a Nd-Fe-B type anisotropic exchange spring magnet comprising:

hard magnetic phases and soft magnetic phases;

wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;

a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ;

and a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the alloy 0.01 to 30 atom% of Fe is replaced with Co.

2 (Canceled)

3 (Previously Presented): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 1, wherein 0.01 to 80 atom% of Nd is replaced with Pr.

4 (Previously Presented): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 1, wherein 0.01 to 10 atom% of Nd is replaced with Dy or Tb.

5 (Canceled)

6 (Previously Presented): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 1, wherein Fe or Co are replaced by at least one element selected from the group consisting of

Al, Mo, Zr, Ti, Sn, Cu, Ga and Nb, a summed amount of the at least one element being 0.1 to 3 atom% of a total amount of the Nd-Fe-B type rare earth magnet alloy.

7 (Original): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 1, wherein the Nd-Fe-B type rare earth magnet alloy is a thin strip crystalline alloy produced by a strip casting method.

8 (Original): The Nd-Fe-B type rare earth magnet alloy as claimed in claim 7, wherein a thickness of the thin strip alloy is within a range from 30 to 300 μm .

9 (Previously Presented): Powder of a Nd-Fe-B type rare earth magnet alloy, the Nd-Fe-B type rare earth magnet alloy comprising:

hard magnetic phases and soft magnetic phases,

wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;

a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ;

and a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the alloy 0.01 to 30 atom% of Fe is replaced with Co.

10 (Canceled)

11 (Original): The powder as claimed in claim 9, wherein the powder is heat treated within a range from 500 to 800 $^{\circ}\text{C}$.

12 (Withdrawn): A method of producing powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width

of the soft magnetic phases is smaller than or equal to $1\text{ }\mu\text{m}$ and a minimum distance between the soft magnetic phases is greater than or equal to $0.1\text{ }\mu\text{m}$, the method comprising:

pulverizing the Nd-Fe-B type rare earth magnet alloy by means of a ball mill using a dispersant under a non-oxidation atmosphere.

13 (Withdrawn): The method as claimed in claim 12, wherein the ball mill is of a wet type.

14 (Withdrawn): The method as claimed in claim 12, wherein the ball mill is of a dry type.

15 (Withdrawn): A method of producing a Nd-Fe-B type anisotropic exchange spring magnet, comprising:

obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to $1\text{ }\mu\text{m}$ and a minimum distance between the soft magnetic phases is greater than or equal to $0.1\text{ }\mu\text{m}$;

obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm^2 in a magnetic field ranging from 15 to 25 kOe; and

obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to $800\text{ }^{\circ}\text{C}$ and at a compressing pressure ranging from 1 to 10 ton/cm^2 in a discharge plasma sintering unit.

16 (Withdrawn): The method as claimed in claim 15, wherein the powder is obtained by pulverizing the Nd-Fe-B type rare earth magnet alloy by means of a ball mill.

17 (Withdrawn): A Nd-Fe-B type anisotropic exchange spring magnet produced by a method of obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard

magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to $1\text{ }\mu\text{m}$ and a minimum distance between the soft magnetic phases is greater than or equal to $0.1\text{ }\mu\text{m}$; obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm^2 in a magnetic field ranging from 15 to 25 kOe; and obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to $800\text{ }^\circ\text{C}$ and at a compressing pressure ranging from 1 to 10 ton/cm^2 in a discharge plasma sintering unit.

18 (Withdrawn): The Nd-Fe-B type anisotropic exchange spring magnet as claimed in claim 17, wherein a density of the anisotropy exchange spring magnet is 95% of a true density of a magnet alloy having a composition as same as that of the anisotropic exchange spring magnet.

19 (Withdrawn): A motor comprising:

a Nd-Fe-B type anisotropic exchange spring magnet produced by a method of obtaining powder of a Nd-Fe-B type rare earth magnet alloy which comprises hard magnetic phases and soft magnetic phases wherein a minimum width of the soft magnetic phases is smaller than or equal to $1\text{ }\mu\text{m}$ and a minimum distance between the soft magnetic phases is greater than or equal to $0.1\text{ }\mu\text{m}$, obtaining a compressed powder body by compressing the powder at a compressing pressure ranging from 1 to 5 ton/cm^2 in a magnetic field ranging from 15 to 25 kOe, and obtaining a bulk magnet by sintering the compressed powder body at a temperature ranging from 600 to $800\text{ }^\circ\text{C}$ and at a compressing pressure ranging from 1 to 10 ton/cm^2 in a discharge plasma sintering unit.

20 (Previously Presented): A Nd-Fe-B type rare earth magnet alloy for producing a bulk of a Nd-Fe-B type anisotropic exchange spring magnet, comprising:

hard magnetic phases and soft magnetic phases;

wherein a minimum width of the soft magnetic phases is smaller than or equal to 1 μm ;
and a minimum distance between the soft magnetic phases is greater than or equal to 0.1 μm ; and
a composition of the Nd-Fe-B type rare earth magnet alloy is expressed by the following
chemical formula (1)



where x is within a range from 9 to 11, y is within a range from 5 to 8 and z is within a range
from 0 to 2, wherein chemical formula (1) optionally comprises Co, and if Co is present in the
alloy 0.01 to 30 atom% of Fe is replaced with Co.

21 (New): The powder as claimed in claim 9, wherein the powder is produced by
pulverizing the Nd-Fe-B type rare earth magnet alloy into a size smaller than or equal to a size of
the hard magnetic phase by means of a ball mill so as to exhibit an anisotropic property.